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(Coal mines and mining-Equipment and supplies)

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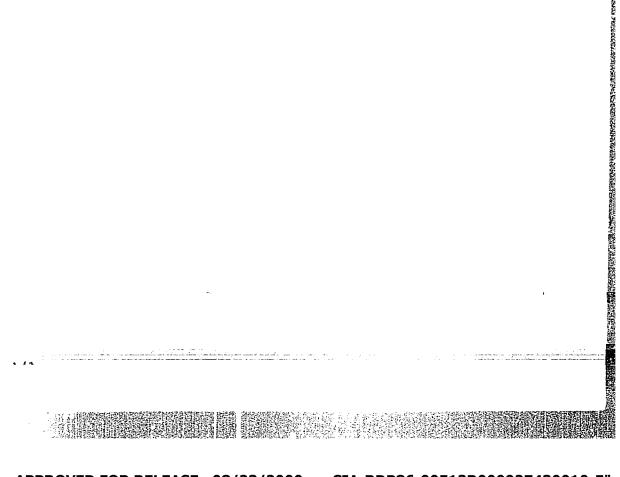
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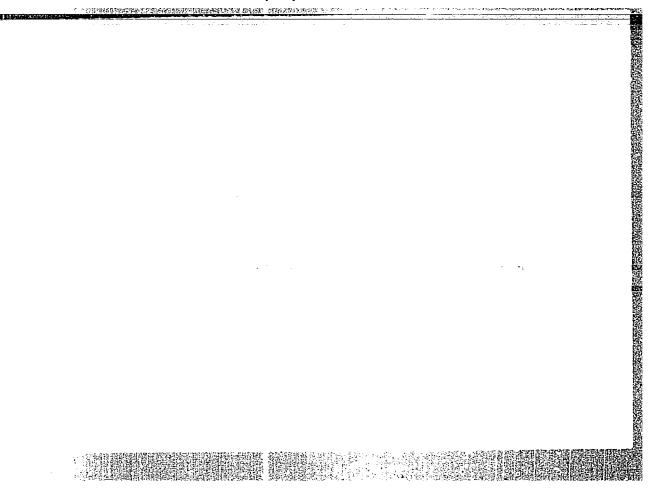
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MULISH, YA.K.

WSR/Miscellaneous

Cerd 1/1

: Pub. 133 - 21/21

Authors

: Kulish, Ya. K., deputy of the Kursk Line Technical Administration

Title

t Line Technical Centers are supplied unsatisfactorily with poles

Periodical

f Vest. svyazi 9, the 3-rd page of the folder, Sep 1954

Atetract

In a letter to the editor the author describes various discrepancies in supplying the line technical centers of Kursk Oblast' with telegraph and telephone poles.

Institution :

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Submitted

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- Polucheniye izotopov. Moshchnyye gamma-ustanovki. Radiometriya i dozimetriya; trudy konferentsii... (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.
- Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.
- Editorial Board: Frolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alekzeyev, B.A., Bochkarev, V.V., Leshchinskiy, N.I., Malkov, T.P., Sinitsyn, V.I., and Popova, G.L. (Secretary); Tech. Ed.: Novichkov, N.D.

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Isotope Production (Cont.)

SOV/1297

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

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KULISH, Ye Ye.

PHASE I BOOK EXPLOITATION SOV/1378

Sovremennoye oborudovaniye dlya raboty s radioaktivnymi izotopami; sbornik materialov (Modern Equipment for Working With Radioactive Isotopes; Collection of Materials) Moscow, Izd-vo glavnogo upravleniya po ispol'zovaniyu atomnoy energii pri sovete M-va upravleniya po ispol'zovaniyu atomnoy energii pri sovete M-va SSSR, 1958. 110 p. (Series: Atomnaya energiya. Prilozheniye, 1958, no. 5) 8,450 copies printed.

Ed.: Zavodchikova, A.I.; Tech. Ed.: Popova, S.M.

PURPOSE: This book is intended for personnel engaged in activities involving the use of radioactive isotopes.

COVERACE: This is supplement No. 5 to the periodical Atomnaya energiya for 1958. It contains 3 articles dealing with modern techniques, methods and apparatus for handling radioactive isotopes and may serve as a handbook in this respect. Schematic diagrams and illustrations of modern equipment for the remote handling of radioactive materials are given, as well as detailed descriptions of working principles.

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"Some Engineering Technological Aspects of Radioisotope and Labeled Compound Freduction in the USSR."

paper to be presented at the 2nd UN Intl.' Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 50.

sov/89s-58-5-1/4

21(5) AUTHORS: Bochkarev, V. V., Kulish, Ye. Ye., Tupitsyn, I. F.

TITLE:

Some Technical and Technological Problems in the Production of Radioactive Isotopes and Tracer Compounds in the USSR (Nekotoryye tekhnicheskiye i tekhnologicheskiye voprosy proizvodstva radioaktivnykh izotopov i mechenykh soyedineniy v SSSR)

PERIODICAL:

Atomnaya energiya, 1958, Supplement 5, pp 5 - 25 (USSR)

ABSTRACT:

In 1958, 110 radioactive isotopes were produced commercially. 92 of them were formed by neutron irradiation. Prior to the irradiation the initial materials must be purified, if possible, so that in the subsequent processing of the radioactive elements the impurity activities do not yield too much wasted often it is possible to carry out the irradiations with enriched isotopes such as Fe55, Sn123, Te127, Se75, Cd115. The portions irradiated fluctuate between 0.5, 1.0, 10 and 20 cm and were contained either in aluminum containers, boron-free glass bottles or plastic containers. The irradiation periods for isotopes with a half-life up to 3 days is 6, 9 or 15 hours. Isotopes with a half-life period of 3-30 days are

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Some Technical and Technological Problems in the 50V/89S-58-5-1/4 Production of Radioactive Isotopes and Tracer Compounds in the USSR

irradiated for 30 days. Isotopes with a half-life of more than 30 days (S35, Ca45) are kept in the reactor for 90 days. For the production of the isotopes c14 and c136 the initial material is irradiated for 6 to 12 months. In order not to disturb the most favorable reactor flux distribution on the feeding of the reactor with the ampoules to be irradiated a load diagram of the single irradiation chambers was set up prior to the experiments. The feeding in the different channels is therefore carried out in such a way that the original flux distribution is maintained. The irradiated samples are treated radiochemically and the desired radioactive isotopes are separated. In certain cases certain compounds are marked by these radioactive isotopes. The still high amounts of the preparations are then divided and filled into smaller ampoules. In the USSR 280 of the 450 chemical compounds produced in the usual way were produced which are synthesized from C14, S35, H3, p32, C136. For the production of tracer compounds only 1 or 2 initial materials are used for the isotopes mentioned above. In this connection it is often necessary to build-in the radioactive atoms into a

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(1)

Some Technical and Technological Problems in the 30V/89S-58-5-1/4 Production of Radioactive Isotopes and Tracer Compounds in the USSR

certain place of a polyatomic melecule. The transition into a complex organic compound takes place by synthesis or other radiochemical methods such as isotopic exchange, reactions with "hot"atoms etc. The production of chemical compounds traced with soft β radiators is carried out at a preparation activity of 100 mC until some C are attained; this is done activity of 100 mC until some C are attained; the production in laboratories equipped with glove boxes. For the production of organic compounds marked with C 14 mainly the synthetic of organic compounds marked with C 14 mainly the synthetic method is applied using almost always BaC 140 , as an initial

product. The possible intermediate products are listed in a table. The possibilities based on the synthetic method are mentioned by which various compounds marked with s35 can be obtained from barium sulfate as an initial substance. The discharge channels and boxes used in the laboratories are equipped with manipulators or gripping gloves. Moreover, they are equipped with filters collecting the aerosols and gaseous impurities. Furthermore, these rooms are equipped with own water, gas and vacuum supplies and dispose of special channels for the removal of radioactive waste products. Photographic

Card 3/4

Some Technical and Technological Problems in the SOV/89S-58-5-1/4 Production of Radioactive Isotopes and Tracer Compounds in the USSR

representations are shown of 4 types of these boxes. Other very important appliances used in these radioactive laboratories are remote-control tools such as tongs, pincers, mirrors etc. Remote-controlled cutting tools, soldering bits etc. play an important part too. For the manipulation of very small volumes of active liquid volumes hydromanipulators, automatic remote-controlled burettes and pipettes are used. It is possible, for instance, to decant volumes 0.1 - 100 ml in accurate doses by means of such a hydromanipulator. Before dispatch each preparation is closely examined. The physicochemical constants, the content of the main components, the total and the specific activity, the share of the active and inactive impurities are determined. As an example it is described how the content of the y-isomer C136m is determined in a hexachlorane preparation not yet purified. The quantitative determination of small concentrations is carried out mainly by spectrum analysis or by the polarographic method. Marked preparations used for medical or biological purposes are additionally examined as to their content of physiologically important admixtures. There are 14 figures and 2 tables.

Card 4/4

KULISH, YEYE

PHASE I BOOK EXPLOITATION

sov/4536

- Tashkentskaya konferentsiya po mirnomu ispol'zovaniyu atomnoy energii. Tashkent, 1959
- Tezisy dokladov (Outlines of Reports of the Tashkent Conference on the Peaceful Uses of Atomic Energy) Tashkent, Izd-vo AN Uzbekskoy SSR, 1959. 229 p. 2,000 copies printed.
- Sponsoring Agencies: Akademiya nauk Uzbekskoy SSR; Nauchno-tekhnicheskiy komitet Soveta Ministrov UzSSR.
- Resp. Ed. for this book: L.G. Gurvich; Ed. of Publishing House: I. G. Gaysinskaya; Tech. Ed.: V. P. Bartseva.
- PURPOSE: This book is intended for nuclear physicists and other members of the scientific community interested in recent progress in the peaceful uses of atomic energy.
- COVERAGE: This collection of abstracts of reports and papers read at the Tashkent Conference on the Peaceful Uses of Atomic Energy reports on research on a number of theoretical problems in nuclear and radiation physics, practical problems

 Cardel/28

Outlines of Reports of the Tashkent Conference (Cont.)

sov/4586

and methods in the preparation of radioactive isotopes, and the application of isotopes in industry, geology, agriculture, medicine, plant and animal biology, and other branches of the national economy and scientific research. The Table of Contents has been expanded to include authors and titles of abstracted papers appearing in section headings "Plenary authors" through 'Radioactive Isotopes and Nuclear Radiations in Chemistry's No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Plenary Sessions

[Arifov, U. A., Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics AS Uzbekskaya SSR). Perspectives for the Development of Scientific Research at the Institute of Nuclear Physics AS Uzbek SSR]

[Kulish, Ye. Ye., and G. M. Fradkin, Glavnoye upravleniye po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR (Main Administration for Utilization of Atomic Energy of the Council of Ministers of the USSR). Production of Radioactive Isotopes in the Soviet Union Card 2/28.

6

5

GRABLEVSKIY, V.N.; KULISH, Ye.Ye.; MATYUSHINA, N.A.; POPOVA, G.L.;
POTAPOV, S.P.; SAVITSKIY, P.S.; TEREKHOVA, V.N.; FRADKIN, G.M.;
LABAZNOV, V.I., red.; VLASOVA, N.A., tekhn.red.

[Isotopes, radiation sources, and radioactive materials; a catalog] Izotopy, istochniki izlucheniia i radioaktivnye materialy; katalog. Sost. avtorskim kollektivom: V.N.Grablev-materialy; katalog. Sost. avtorskim kollektivom: V.N.Grablev-skii i dr. Moskva, Izd-vo Glav.uprav.po ispol'zovaniiu atomnoi skii i dr. Moskva, Izd-vo Glav.uprav.po ispol'zovaniiu atomnoi energii pri Sovete Ministrov SSSR, 1959. 269 p. (MIRA 12:12)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye po ispol'zovaniyu atomnoy energii. (Radioactive substances)

S/089/60/009/003/013/014 B006/B063

AUTHOR:

Kulish, Ye. Ye.

14

TITLE:

α-, β-, and y-Radiation Sources for Control and Automation

of Technological Processes

PERIODICAL:

Atomnaya energiya, 1960, Vol. 9, No. 3, pp. 241-242

TEXT: The present article gives a survey of the instruments and radiation sources used at present in the Soviet Union. The properties and range of application of the various sources are discussed. Among the instruments used at present in Soviet industry are contactless, radioactive thickness gauges; densimeters; level-meters; defectoscopes, etc. These and many other instruments help to solve problems in technology and research. Many of these instruments are now mass-produced: level-indicators of the type PMY-1 (RIU-1), level-meters of the types YP-6A (UR-6A) and YP-7 (UR-7), densimeters of the type TMP-2 (PZhR-2), pressure gauges of the type MMP-3A (MIR-3A), and other instruments are manufactured by the Kaluzhskiy zavod pirometricheskikh priborov (Kaluga Factory for Pyrometers); thickness gauges of the types MTY-495 (ITU-495), MTY-496 (ITU-496), and

Card 1/3

 $\alpha-,~\beta+,~and~\gamma-Radiation Sources for Control and Automation of Technological Processes$

5/089/60/009/003/013/014 8006/8063

FT-150 (GT-150), weight meters of the type BMB(BIV), difference meters of the type P-4 (R-4), piece counters of the type PCH-11 (RSP-11), etc. by the Tallinskiy zavod KIP (Tallin Factory KIP); electronic relays by the Khar'kovskiy zavod KIP (Khar'kov Factory KIP); gamma instruments for defectoscopic purposes by the Moskovskiy zavod "Mosrentger" (Moscow Factory "Mosrentgen"), and many other instruments. The demands made of industry on radiation sources are particularly high; so they are exercise to aggressive media, shocks, vibrations, and temperatures between street degrees below zero and 200-300°C. etc. Radiation sources are proceed to the degree of the control in three varieties: 1) in the form of wires, rods, etc. The motive to al is sometimes enclosed by Al foil as, e.g., in the case of 1204 2) The active material is sealed in ampoules (for average and making) tivities). Single or double containers made of glass or metal are used according to the kind of source. 3) The sources are deposits of active material, placed on backings of different materials (especially for Sr90, pm 147, Pu, etc.). More than 200 sources of different sems are a produced by industry from 14 isotopes. In this connection it is noted that, as a result of bremsstrahlung and radiation due to internal conve sion, electron capture, and positron annihilation, numerous gamma sources Card 2/3

r-, p-, and r-Radiation Courses for Control and rutanation of Technological Processes

c/089/60/009/015/013/014 8006/B063

emit spectra that differ largely from the spectra given in tables for the respective isotopes. For defectoscopic purposes the following soft emitters are recommended for light alloys, metals, and thin foils of heavy ters are recommended for light alloys, metals, and thin foils of heavy metals, as well as for technological control of materials with a low atomic number: Eu155, Se75, Ce144, and Zn65. Beta emitters may also be atomic number: Eu155, Se75, Ce144, and Zn65. Beta emitters may also be divided into two groups according to their spectral "purity": 1) "pure" beta emitters (Pm147, T1204, Sr90, and Ce144) which are particularly suitable for piece counters, thickness gauges, etc.; 2) sources with a large bremsstrahlung admixture (Ce144 on Ru106 plates, and Sr90 in sources of the type EN(BI)), which are of special us; for instruments in which radiation penetrates the material.

Card 3/3

FRADKIN, G.M.; KULISH, Ye.Ye.; PCHALINTSEVA, G.M., red.; POPOVA, S.M., tekhn. red.

[Sourses of \propto , β , γ , and neutron radiation for the automation and control of industrial processes] Istochniki \sim -, β -, γ -i neitronnykh izluchenii dlia kontrolia i avtomatizatsii tekhnologicheskikh protsessov. Moskva, Gos.izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1961. 86 p. (MIRA 15:1) (Radioactive substances-Industrial applications)

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927430010-5

WULISH, Ye. Ye.

"Some Problems of Radioisotope Production in Research Reactors of the IRT and VVRS Types."

report presented at the Symposium on Programming and Utilization of Research Reactors, IAEA, Vienna, 16-21 Oct 1961.

5/638/61/001/000/003/056 33097 B102/B138 Kulish, Ye. Ye., Fradkin, G. M. Production of radioisotopes in the USSR Tashkentskaya konferentsiya po mirnomy ispolizovaniyu Tashkentskaya konferentsiya po mirnomy 1spolizovaniyu Tashkent, 1959, Trudy, v. 1, Tashkent, atomnoy energii. 21.4000 TEXT: The authors give a survey of the most important details of goviet isotope production. Which has greatly increased in the last few years isotope production. AUTHORS: TEXT: The authors give a survey of the most important details of Sovie isotope production, which has greatly increased in the last few years. isotope production, which has greatly also been laid down for isotope standard 7'N (TU) specifications have also been laid down for isotope standard 7'N (TU) specifications isotope production, which has greatly increased in the last few years increased in the last few years the production, which has greatly increased in the last few years the production nrocesses for A standard Ty (TU) specifications have also been laid down for isotope for A standard Ty (TU) specifications two years the production nrocesses for A production. Standard Ty (TU) specifications have also been laid down for isotope 40 new most two years the production processes. High-purity production. During the last two years compounds have been developed. High-purity isotopes and about 200 new labelled compounds (n, y) reactions. High-purity of the isotopes are produced as results of TITLE: isotopes and about 200 new labelled compounds have been developed. High-purity of (n, y) reactions. stable of the isotopes are produced as results of high-purity stable radioisotopes are either obtained by irradiating high-purity. SOURCE: of the isotopes are produced as results of (n,7) reactions. High-!

of the isotopes are produced as results of (n,7) reactions. High-!

irradiating high-purity stable

irradiating high-purit radioisotopes are either obtained by irradiating high-purity stable irradiating high-purity s isotopes or by choosing reactions in which the target is a different The latter method has become very), The latter method this made (n,p), as the isotope produced, been started up, as also obtained for element from the fast reactor has now isotopes are also obtained (n,a) and (n,2n) reactions nossible. popular since the fast reactor has been started up, as this made (n,p); from (n,a) and (n,2n) reactions possible. New isotopes are also obtained from card 1/3 APPROVED FOR RELEASE: U8/25/2000

Production of radioisotopes ...

33051 \$/638/61/001/000/003/056 B102/B138

the decay of isotopes produced by (n,γ) , by (T,n) and (T,2n) reactions and from uranium fission fragments (Pm 147, Cs 137, Sr 90 etc). They can be separated in the pure state. The new labelled compounds include a large number of complex compounds such as glycerin, glyceric acid, and benzyl alcohol which are important in biochemistry, and pharmaceutical products labelled with C14 Besides the conventional chemical methods of producing labelled compounds increasing use is made of the energy of the recoil nuclei, and the method of isotope exchange is also employed. The activities and dimensions of the Eu^{152} , Co^{60} , S^{75} , Tu^{170} , R^{226} , C^{144} , Eu^{155} , and Cs^{137} preparations commercially produced since 1959 are tabulated. 95% of the annual consumption of $5 \cdot 10^5$ curies consists of α -, β -, γ - and n-emitters. Production of the latter, which have become important in mining and well drilling, has been particularly accelerated just recently. Besides Po-Be, Ra-Be sources are also used, which are produced with different dimensions and with certain maximum intensities between 1.104 and 3.107 n/sec. The prices of the most important isotope preparations are given. To standardize activity measurements comparative measurements with standard apparatus

APPROVED FOR RELEASE: 08/23/2000

33081 \$/638/61/001/000/003/056 B102/B138

Production of radioisotopes ...

are suggested. Of the short-lived isotopes ($t_{1/2}$ <3 d) 52 different compounds of 42 isotopes are being produced at present. The most important are Na 24 , Si 31 , K 42 , Cu 64 , Br 32 , Au 198 , J 131 , and P 32 . The starting materials are the chemically or analytically pure reagents. Special laboratories are needed to produce preparations of short-lived isotopes. A project for such a laboratory, produced by the Moskovskiy proyektnyy institut (Moscow Planning Institute), is obtained. There are 1 figure and 5 tables.

ASSOCIATION:

Glavnoye upravleniye po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR (Main Administration for the Utilization of Atomic Energy at the Council of Ministers of the USSR)

Card 3/3

CIA-RDP86-00513R000927430010-5"

\$/194/62/000/001/028/066 D201/D305

AUTHORS:

Fradkin, G. M. and Kulish, Ye. Ye.

TITLE:

Sources of alpha-, beta-, gamma- and neutron-radia-tion for the control and automation of technological

processes

PERIODICAL:

Referativnyy zhurnal, Avtomatika i radioelektronika, no. 1, 1962, abstract 1-2-129 g (Radioakt. izotopy i yadern. izlucheniya v nar. kh-ve SSSR. T. I., M.,

Gostoptekhizdat, 1961, 95-109)

TEXT: The properties of artificial radioactive isotopes are considered, their characteristics given, ranges of applications shown and the classification of f-, f- and neutron sources, as used in the USSR are given. 6 figures, 6 tables. Abstracter's note: Complete translation. 7

Card 1/1

SAVITSKIY, P.S., otv. red.; KULISH, Ye.Ye., red.; FRADKIN, G.M., red.;
VORONOVA, A.I., red.; FOPOVA, S.M., tekhn. red.

[Isotopes, radiation sources and radioactive materials;
catalog]Izotopy istochniki izluchenii i radioaktivnye materialy;
catalog. Izd.2., dop. Moskva, Gosatomizdat, 1962. 218 p.
(MIRA 16:2)

1. Russia (1923- U.S.S.R.)Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii.

(Isotopes) (Radiation)

RUMYANTSEV, S.V.; DOBROMYSLOV, V.A.; SHTAN', A.S.; KULISH, Ye.Ye.

Radiation characteristics of N -sources from Sm 14.5 and enriched Se75. Atom. energ. 15 no.6:511-514 D '63.

(MIRA 17:1)

KULISH, Yu. S.

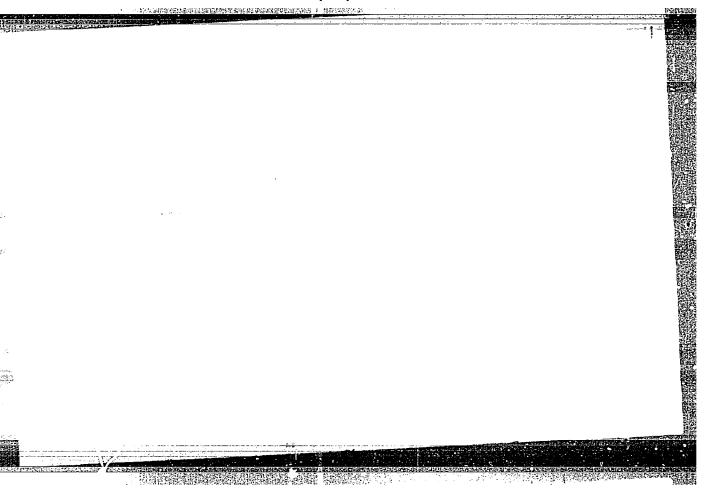
Cand Geolog-Mineralog Sci

Dissertation: "Experiment for Investigating an Interaction of Grounds with Bitumeus and Their Components." 30/3/50

Moscow Order of Lenin State V imeni M. V. Lomonosov.

SO Vecheryaya Moskva Sum 71

CIA-RDP86-00513R000927430010-5" APPROVED FOR RELEASE: 08/23/2000



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927430010-5"

KULISHENKO, AZ.

USSR/Physical Chemistry - General Problems of Isotope Chemistry, B-7

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60988

Author: Kulishenko, A. Z.

Institution: None

Title: Equation of the Curve of Absorption of Radiction in Active Layer of Sample for 835

Periodical: Zh. fiz. khimii, 1554, 28, No 7, 1186-1192

Abstract: On the basis of measurements of activity of BaSO4 precipitates (tagged with S35) of different thickness a more precise empirical

formula has been derived for computation of the absorption of formula has been derived for computation of the absorption of $I_{\rm X} = I_{\rm C} =$ ration" layer. The error in computation of the degree of absorption of radiation thus does not exceed 2%. Presented is a table of corrections of absorption for different x calculated in accordance with equation (1). Shown is the necessity of making

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CIA-RDP86-00513R000927430010-5" **APPROVED FOR RELEASE: 08/23/2000**

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CIA-RDP86-00513R000927430010-5

USSR/Physical Chemistry - General Problems of Isotope Chemistry, B-7 Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60983

Abstract: correction for absorption in filter paper in the gase of samples of a thickness below that of the "saturation" layer.

Card 2/2

CIA-RDP86-00513R000927430010-5" APPROVED FOR RELEASE: 08/23/2000

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927430010-5

KHLISHENKO, AZ. USSR/Chemistry - Fuels FD-3239

Card 1/1

Pub. 41-20/22

Author

: Kulishenko, A. Z. and Medvedev, K. P., Khar'kov

Title

: Use of radioisotope S35 in investigating the thermochemical

conversion of sulfur compounds in coal during coking

Periodical

: Izv. AN SSSR, Otd. Tekh. Nauk 7, 145-148, Jul 55

Abstract

: Gives formulas for computing distribution of active sulfur, added radioactive sulfur, pyritic sulfur, and organic sulfur in the products of thermal decomposition of coal. Explains experimental procedure used to verify theory. Finds results in agreement with those obtained by Eaton, Hyde, and Road (Analytical Chemistry, Vol 21, No 9, 1949). Three tables.

Seven references, 6 USSR.

Institution

Submitted

: 28 February 1955

CIA-RDP86-00513R000927430010-5" APPROVED FOR RELEASE: 08/23/2000

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807/65-58-9-12/16

AUTHORS:

Medvedev, K. P. and Kulishenko, A. Z.

TITLE:..

Investigations on the Participation of Forms of Sulphur During the Formation of Carbon Disulphide From Coke Oven Gas with the Aid of Radio-Isotopes. (Issledovaniye usbooting) uchastiya form sery uglya v obrazovanii serougleroda koksovogo gaza pri pomoshchi radioizotopov)

Khimiya i Tokhnologiya Topliv i Masol, 1958, Nr 9,

pp 62 - 66, (USSR)

ABSTRACT:

PERIODICAL:

These investigations concern the types of sulphur participating in the forms of carbon disulphide during the coking of coal and schists. The use of radioactive isotopes makes it possible to determine the nature and quantity of each type of sulphur taking part in the process. Details of experimental procedures and calcu-1.3). 0.2 - 0.4% CasO₄.2H₂O, tagged with the radioactive S.5, is added during investigations lations were described in earlier publications (Refs. cal conversions. Coals from the Donets Basin grade G and PS were used; their composition and also sulphur content are given in Table 1. Table 2: data on the conversion of the sulphur to sulphur disulphide depending on the temperature of heating and the grade of coal.

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APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927430010-5"

SOV/65-58-9-12/16

Investigations on the Participation of Forms of Sulphur During the Formation of Carbon Disulphide From Coke Oven was with the Aid of Radio-

Isotopes.

It was found that mineral sulphur takes part in the formation of carbon disulphide. The role of pyrite and organic sulphur was investigated. The same grades of, coal and standard schists comprising 20% grade G, 40% grade PZh, 20% K and 20% PS grade coal were tested. Analysis data is given (Table 3). The separation of natural sulphur in the form of carbon disulphide proceeds at a greater rate in less metamorphosal coal grade G than in the coal grade Ps. Results on the role of natural, pyrite and organic sulphur during the formation of carbon disulphile are given in Table 4. Table 5: comparison of the types of sulphur in carbon disulphide formed during the coking of coals and schists. It was concluded that the degree of metamorphosis of the coal is an important factor. Details of complex reactions of disintegration and synthesis occurring at high temperatures in coke ovens can be obtained by using this

Card 2/3

SOV/65-58-9-12/16

Investigations on the Participation of Forms of Sulphur During the Formation of Carbon Disulphide From Coke Oven Gas with the Aid of Radio-Isotopes.

There are 5 Tables and 7 References: method. 1 German and 6 Soviet.

3. Coal gas--Chemical 2. Sulfur--Chemidal react ons 1. Carbon sulfides -- Properties 4. Sulfur isotopes (Radioactive) -- Applications properties

Card 3/3

CIA-RDP86-00513R000927430010-5" APPROVED FOR RELEASE: 08/23/2000

68-53-4-4/21

AUTHOR:

Kulishenko, A. Z

TITLU:

The Use of Redicactive Level and Density Meters for Controlling the Productivity of Flotation Machines (Primeneniye radioaktivnykh urovnemerov i plotnomerov dlya kontrolya i regulirovaniya proizvoditel'nosti

flotatsionnyth auchin)

PERIODICAL: Koks i Khimiya, 1958, Nr 4, pp 10-14 (USSR)

ABSTRACT: For an automatic control of the feed of pulp to flotation machines and its density, recloactive level and density

meters were used at the Chumakovskaya TsCF. The principle of operation of the level actor UR-4 (Fig.1) was as follows: a source of γ-radiation Co⁶⁰ and a receiv were placed in special measuring columns on verticall, moveable suppores. The receiver and the source move clong the

height synchronically and when the middle of the receiver is on the boundary of mediums the system is in equilibrium. With a change in the level of liquid the absorption of γ -radiation also changes, the signal is passed to the servomotor which appropriately moves the source and the receiver. The density meter was based on the variation in absorption of γ -radiation from Co

Card 1/2 with the pulp density. It was found by controlling the

The Use of Radioactive Level and Density Meters for Controlling the Productivity of Flotation Machines

pulp feed and its density the output of flotation machines can be considerably increased. The above two instruments can also be used for the complete automation There are 3 figures, 5 tables and 3 references, all of which are Soviet.

ASSOCIATION: UKhIN

1. Minerals--Flotation 2. Flotation machines--Control systems

3. Radiation meters-Applications 4. Cobalt isotopes (Radioactive)

--Applications

Card 2/2

KULISHENKO, A.Z.; KHARITONOV, A.S.; KUZ'MENKO, A.S.; GARMASH, G.K.

Determination of the viscosity of magnetite in suspension by measuring its magnetic permeability in conjunction with a radioactive densitometer. Koks 1 khim. no.2:13-15 '69. (MIRA 13:5)

1. Ukrainskiy uglekhimicheskiy institut(for Kulishenko, Kharitonov). 2. Yasinovskiy koksokhimicheskiy savod(for Kus'-menko, Garmash).

(Yasinovka--Coal preparation) (Magnetite)

KULISHENKO, A.Z.

Automatization of the flotation division at the Yasinovka By-Product Coking Plant by means of radioactive density meters. Koks.i khim. no.5:17-19 160.

1. Ukrainskiy uglekhimicheskiy institut. (Yasinovka-Flotation-Equipment and supplies) (Automatic control) (Densitometers)

生化学的经验的特别的生活。在对

KULISHENKO, A.Z.; MEDVEDEV, K.P.

Use of the radioisotopes S35 in the study of the process of coal desulfurization. Koks i khim. no.7:5-10 '60. (MIRA 13:7)

1. Ukrainskiy uglekhimicheskiy institut. (Coal) (Desulfuration) (Radioisotopes)

KULISHENKO, A.Z.; BOCHAROV, N.G.; KUZIMENKO, A.S. New flow sheet and automatic control of the flotation process. (MIRA 15:3) Koks i khim. no.3:3-11 62.

Ukrainskiy uglekhimicheskiy institut (for Kulishenko).
 Yasinovskiy koksokhimicheskiy zavod (for Bocharov, Kuz'menko).
 (Coal preparation) (Flotation) (Automatic control)

KULISHENKO, A.Z., kand. tekhn. nauk; KHARITONOV, A.S.; GRIDIN, I.A.

Capacitance transducer for measuring the moisture content of the coking charge in the flow. Koks i khim. no.9:16-19 162. (MIRA 16:10)

1. Ukrainskiy uglekhimicheskiy institut.
(Moisture—Measurement) (Coke)

GARMASH, G.K., GRIDIN, I.R.; KULISHENKO, A.Z.; KHARITONOV, A.S. Magnetic density relay. Zav.lab. 29 no.2:241-242 163. (Automatic control) (Suspensions (Chemistry)) (Electric relays)

KULISHENKO, A.Z., inzh.; RYBALKO, A.M., inzh.; KISHTEV, V.P., inzh.; KIRILYUK, L.V.

Automatic supply of molding sand with the use of radioisotopes. Mashinostroenie no.6:58-59 N-D '64 (MIRA 18:2)

1945

RAZIKOV, M.I.; Primimali uchastiye: KHOVANETS, V.K., inzh.; KULISHENKO, B.A., inzh.; IL'IN, V.P., inzh.

New techniques for automatic hard facing in an atmosphere of carbon dioxide. Avtom. svar. 15 no.6:33-38 Je '62. (MIRA 15:5)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova. (Hard facing) (Protective atmospheres)

KULISHENKO, V.

A word from innovators. Sov.profectuzy 6 no.18:30 D '58.

(MIRA 12:2)

1. Instruktor Kiyevskogo oblacvprofa.

(Kiev--Inventions, Employees')

KOZIOV, V. (g. Astrakhan'); KULISHENKO, V., instruktor; GUSAROV, N.

(Tatarskaya ASSR); GROMADCHENKO, A.; BAYEV, V.; SHCHEGIOV, A., instruktor

With the trade union organizations. Sov.profsoiuzy 7 no.3:62-64

(MIRA 12:3)

F '59.

1. Kiyevskiy oblsovprof (for Kulishenko). 2. Rayprofsozh Karagandinskogo otdeleniya zheleznoy dorogi (for Shcheglov). (Trade unions)

 An important point of a collective agreement. Sov.profectuzy 7 no.9:48 My 159.
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